



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION SITE REMEDIATION AND WASTE MANAGEMENT PROGRAM

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April 26, 2021

Sam Abdellatif
Land and Redevelopment Programs Branch
U.S. Environmental Protection Agency, Region 2
290 Broadway, 25th. Floor
New York, NY 10007-1866

Comment Letter: Well Manual Response to Comments (October 19, 2020 Comments)

RE: Amerada Hess Corp- Former Port Reading Refinery
EPA ID No. NJD045445483
750 Cliff Road
Woodbridge Twp, Middlesex County
PI#: 006148

Dear Mr. Abdellatif,

The New Jersey Department of Environmental Protection (Department) has completed a review of the Well Manual Response to Comments (October 19, 2020 Comments) submitted January 7, 2021. The document was submitted pursuant to the Site Remediation Reform Act (N.J.S.A. 58:10C-1 et seq.), the Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C), and the NJDEP Technical Requirements for Site Remediation at N.J.A.C. 7:26E.

The Department has the following comments:

Response 1: The response is accepted. Please ensure that the updated well location figure is included with all field sampling staff copies of the well manual.

Response 2: The response is accepted.

Response 3: The response is accepted.

Response 4: The response is accepted. Note: The 2019 TD-TOC data was very different from some of the November 5, 2020 TD-TOC data. There can be significant variations in measurements.

Response 5: The response notes that pump placement has always considered well construction and depth to water and has been identified on field sampling data sheets. A primary intent of the WCST is to ensure that the screen intervals from TOC identified on the field sampling data sheets are accurate. Based on prior data sheets, this information is unclear. A description of the summary table with future reports that identifies and describes well construction, gauged depth to ground water (TOC) and pump intake depth (TOC) should be included.

Response 6: The response is accepted.

Response 7: The response is accepted. Hess will work with the Bureau of Water Supply and Well Permitting to resolve documentation for lost and decommissioned monitor wells.

Response 8: The response is accepted.

Additional Comment 9: Well evaluations by a licensed driller after the November 5, 2020 gauging event were completed to determine redevelopment, reinstallation, abandonment, and any well use limitations. TL-1 is listed under Truck Loading Rack wells although it is not a Truck Loading Rack well. Please confirm the correct well: TR-1R (Truck Loading Rack) or TL-1 (Marine Terminal Area).

Additional Comment 10: The following data entry corrections are needed. In addition, refer to the spreadsheet attachment.

AB-2R: The response is correct- total casing length should be 3'. Please correct "Casing Length" in WCST to 3' (says 2').

- Casing AGS was changed to 2.89 - should be 1.89.

AB-4D: Correct "Casing Length" to 28'.

AB-5: Correct "Depth of Well (bgs)" to 10'.

AD-1: Driller evaluated November 2020. Determination pending for continued use/replacement.

- WCST "Screen Interval" should be 3-16' bgs (not 3-18' bgs) based on "well finished to 16" on the well record.
- Well screen length: Since well completion interval was corrected to 3-16', the screen length needs to be corrected to be 13' based on the actual well completion depth.
- Redeveloped November 2020 - gauged TD-TOC 13'. This should be considered the open screen interval, not the well completion screen interval.

SP-1: Depth of well TOC – should be 13' based on well record and subsequent modifications.

LN-4: Screen interval TOC (well record) should be 5.5-15.5 (not 16.5) (Department error in review letter).

- TD TOC based on construction should be 15.5' (not 16.5) (Department error in review letter).
- LN-6:** Depth of well BGS: should be 15' (says 18' which is depth from TOC).
- Depth of well TOC: should be 18' (says 18.2).
- LN-7:** Depth of well BGS: should be 15' (says 18' which is depth from TOC).
- LS-2:** Correct "casing length" to 7.25'.
- PER-2:** Screen interval TOC should be 5-12' TOC (not 2-12' TOC).
- Casing length should be 5' (not 2').
- PER-4:** The screen length was changed from 15' (well record) to 12' (based on gauged TD of well after redevelopment). Construction information in the WCST should reflect the permit (screen length: 15', screen interval BGS/TOC: 3-18', casing length: 3'). Open screen interval is 3-15' bgs/TOC.
- PER-6R:** Screen length was changed to 17'. Should be 19'.
- Screen interval BGS should be 1-20' bgs (not 3-20').
- PER-8:** Based on boring TD and well TD, the deeper boring labeled PER-8 appears to go with the PER-7 well.
- Construction information should be the same as the permit (screen interval 5-17' BGS/TOC; depth of well 17' BGS/TOC'). The open screen interval is 5-15' BGS/TOC.
- PER-9D:** There is conflicting well construction information: 5' well screen on the well record, and 7' well screen on geologist log; well depth 30' bgs on well record and 35' bgs on the geologist log, with about 2.5' casing stickup. The November 2020 Gauged TD TOC was 37'.
- If screen length cannot be confirmed the WCST must reflect the shorter screen (5' bgs). The total depth appears to be 35' bgs, 37.5' TOC.
 - Modify WCST to reflect: Screen length: 5'; screen interval BGS: 30-35'; screen interval TOC: 32.5-37.5'; casing length 32.5'.
- PER-9DD:** There is conflicting well screen interval information: 5' or 9'. The total depth TOC is the same in two gauging events (2018 gauged TD was 68' TOC, and 2020 gauged TD was 67.75' TOC). Shorter, 5' screen length reflected in WCST.
- Modify WCST to reflect: Screen Interval TOC 63-68'; well depth TOC 68'.
- PL-1R:** Abandoned well construction information is set.
- Correct "Depth of Well BGS" and "Depth of Well TOC" to 17.5'
- PL-3:** Flush mount well depth BGS and well depth TOC should be 18' (was changed to 20').
- PL-4:** "Depth of Well BGS" should be 15'; Depth of Well TOC to 17'.
- PL-6RR:** Well construction information is set. Please add "screen type".
- PL-8:** Well depth BGS was changed to 20' (should be 18').
- SPS-3 through SPS-6:** Change "Screen Interval BGS" to 3-13' bgs; Change "Screen Interval TOC" to 5-15' TOC.
- SP-6:** Change "Depth of Well BGS" to 13', "Depth of Well TOC" to 15'.
- SP-7:** Change "Depth of Well BGS" to 12', "Depth of Well TOC" to 15'.
- TC-1:** Change "Depth of Well TOC" to 18'.
- TC-2:** Change "Depth of Well TOC" to 18'.
- TC-3:** Change "Depth of Well BGS" and "Depth of Well TOC" to 18'.
- TM-1:** Depth of well bgs should be 18' (not 19').

TM-2: Depth of well BGS should be 19' (not 18'), and depth of well TOC should be 21.5' (not 21').

TM-6: Correct screen interval TOC to be 5.5-20.5, and Well Depth TOC based on well construction to 20.5'.

TM-7: Depth of well TOC (well construction record) should be 21.5'.

TR-1 through TR-4: Abandoned well construction information in the WCST is correct.

- Based on CMP Figure 11.1, correct the well permit numbers as follows in the WCST. (The correct well permits were included with the renamed wells in the Well Manual):
 - TR-1 (Old MW-3 renamed TR-1): Permit number 26-35174
 - TR-2 (Old MW-1 renamed TR-2): Permit number 26-35172
 - TR-3 (Old MW-4 renamed TR-3): Permit number 26-35175
 - TR-4 (Old MW-2 renamed TR-4): Permit number 26-36173
- Include the boring logs from CMP Chapter 11, Attachment 11.1. Please note the BORING No. Well ID (not any handwritten corrections) to match with the renamed well as identified above. All of the boring logs are in this CMP attachment, but one log is separated from the others by a few pages.
 - Boring No. MW-3 goes with TR-1 information
 - Boring No. MW-1 goes with TR-2 information
 - Boring No. MW-4 goes with TR-3 information
 - Boring No. MW-2 goes with TR-4 information

TR-3R: Correct Well Depth BGS (20') and Depth of Well TOC (20'). Both say 15'.

Other Lost/Abandoned Wells:

MW-1 (2600007560): Correct "Depth of Well BGS" and "Depth of Well TOC" to 5.33'

MW-2 (2600007561): Abandoned well information:

- Also reflect "Screen Length" and "Depth of Well BGS" are unknown.
- Correct Depth of Well TOC to 10'10" per well record.

MW-2 (2600072692): Correct Screen interval BGS: 10-20' (not 3-10'), Depth of Well BGS 20' (not 13'), Depth of Well TOC 20' (not 13')

MW-1 (2600072691): Not on the list; installed under same permit as 2600072692

OBS-1: 26000005337 RCRA well – abandoned: Correct "Depth of Well BGS" to 20'; Correct "Depth of Well TOC" to 22'

OBS-2: 26000005335 RCRA well – abandoned: Correct "Depth of Well BGS" to 14'; Correct "Depth of Well TOC" to 16'

OBS-4: 26000005336 RCRA well – abandoned: Correct "Depth of Well BGS" to 16'; Correct "Depth of Well TOC" to 18'

Construction Questions for the following wells:

LN-1: This well screen interval (6-16' bgs/8-18' TOC) was based on the 10' screen, casing AGS measurement, and the May 2019 gauged TD was 17.35' TOC. The November 2020 gauged TD was 13.73, and redeveloped TD was 14.85' TOC.

- The open screen interval from TOC conservatively estimated to be 8-14.85' TOC.

PER-2DD: Well construction information was set based on 2019 gauged TD TOC (63.01'). Driller evaluated November 2020.

- November 5, 2020 gauged TD was 65.5' TOC and November 19, 2020 gauged TD was 63.3' TOC. Which is the depth to go with?

PL-7: Recent damage to well prevents confirmation of well construction. The information in the WCST reflects well record, but total depth TOC in prior gauging was deeper than expected. Further assessment pending review.

SC-Wells: Please review the data for all "SC-wells" that was in the 3rd or 4th Q 2019 WCST (first iteration) for accurate measurements. There are some differences in measurements that are significant.

The only well with a casing stickup that changed is SC-3. Confirm the completion interval bgs (4.75-14.75'). The other wells were unchanged or flush mount wells. Flush mount completion bgs/TOC are considered the same.

	2019 3rd or 4th Quarter Progress Report 1st WCST with TD-TOC:	2021 TD-TOC:	Well Record TD-TOC:	New-Existing TD-TOC:	Result:
SC-1	15.2	15.24	15	15.5	OK
SC-1D	33.4	33	30	33	Review for accuracy
SC-1DD	63.3	59.15	60	60	Review for accuracy
SC-2	15.4	15.4	15	15.5	OK
SC-2D	35.45	35	35	35	Review for accuracy
SC-2DD	61.8	60.9	60	61	Review for accuracy
SC-2DDD	79.4	77.2	78	78	Review for accuracy
SC-3	14.34	17.54	17	17.75	Review for accuracy
SC-3D	37.9	37.9	38	38	OK
SC-3DD	68.1	68.1	68	68	OK
SC-3DDD	84.4	84.05	84	84	Review for accuracy
SC-4	15.3	15.23	15	15.5	OK
SC-4D	35.7	34.7	35	35	Review for accuracy
SC-4DD	60	59.92	60	60	OK

SC-1D: Issues not resolved. Need December 2020 well assessment information.

SC-1DD: Issues not resolved. Need December 2020 well assessment information.

SC-2D: Issues not resolved. Need December 2020 well assessment information.

SC-2DD: Issues not resolved. Need December 2020 well assessment information.

SC-2DDD: Issues not resolved. Need December 2020 well assessment information.

SC-3: Need December 2020 well assessment information for well redevelopment, blockage, repair, etc.

SC-3DDD: Issues not resolved. Need December 2020 well assessment information.

SC-4D: Issues not resolved. Need December 2020 well assessment information.

TM-4: November 2020 TD TOC of 18.5' is very different from prior TD TOC (15.01').

- Well Depth TOC is 15' based on well record. Resolve TD and well construction.

PER-7: Based on boring TD and November 2020 well TD TOC (17.93' TOC), the shallower boring labeled PER-7 appears to go with the PER-8 well. Based on the PER-8 boring log PID levels at 9-11' bgs, this should be a PER-7 targeted low flow sampling interval.

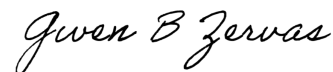
ATTACHMENTS:

1. Identifies accepted wells with no further construction questions.
2. Excel Site Wide Summary Table with highlighted corrections.

Nothing in this correspondence affects Hess' potential liability and obligations to the State Trustee, the Department, or its Commissioner regarding natural resource injuries, restoration, or damages.

If you have any questions regarding this matter, contact Julia Galayda at Julia.Galayda@dep.nj.gov.

Sincerely,



Gwen B. Zervas, P.E.
Section Chief

cc: Julia Galayda, Case Manager
John Virgie, LSRP, Earth Systems
Ann Charles, BEERA
Jill Monroe, BGWPA

ATTACHMENT 1:

Accepted WCST Information Based on Documentation and Correspondence:

Specific Well Evaluations and WCST Information:

Aeration Basin Wells:

AB-1: Well construction information is set.
AB-2: Abandoned well construction information is set.
AB-3: Well construction information is set.
AB-4: Abandoned well construction information is set.
AB-4R: Well construction information is set.
AB-6: Well construction information is set.

Administration Building Wells:

AD-2: Well construction information is set.
AD-2DD: Well construction information is set.
AD-3: Well construction information is set.
AD-3D: Well construction information is set.
AD-4: Well construction information is set.
AD-5: Well construction information is set.
AD-5D: Well construction information is set.
AD-6: Well construction information is set.
AD-7: Abandoned well construction information is set.
AD-8: Well construction information is set.
AD-9D: Well construction information is set.
AD-9DD: Well construction information is set.
AD-10: Well construction information is set.
AD-10DD: Well construction information is set.

Fire Training Area Wells:

FA-1 through FA-7: Well construction information is set.

No. 1 Landfarm Wells:

BG-1: Abandoned well construction information is set.
BG-2: Well construction information is set.
BG-3: Well construction information is set.
L1-1: Well construction information is set.
L1-2: Well construction information is set.
L1-3: Well construction information is set.
L1-4: Well construction information is set.
L1-6: Abandoned well construction information is set.
SP-2: Well construction information is set.
SP-3: Well construction information is set.

North Landfarm Wells:

LN-2: Well construction information is set.

LN-3: Well construction information is set.
LN-5: Well construction information is set.

South Landfarm Wells:

LS-1: “Inactive” well construction information is set. Should state “abandoned”.
LS-1R: Well construction information is set.
LS-3: Well construction information is set.
LS-4: Well construction information is set.
LFR-1: Abandoned well construction information is set.

AOC 19 (QC Laboratory):

MW-1: Well construction information is set.
MW-2: Well construction information is set.
MW-3: Well construction information is set.
MW-4: Well construction information is set.

Site Perimeter Wells:

LPG-1 and LPG-1: Well construction information is set.
PER-1: Well construction information is set.
PER-2D: Well construction information is set.
PER-3: Well construction information is set.
PER-3D: Well construction information is set.
PER-5: Well construction information is set.
PER-6: Abandoned well construction information is set.
PER-9: Well construction information is set.
PER-10: Well construction information is set.
PER-10D: Well construction information is set.

Colonial Pipeline Wells:

PL-1: Abandoned well construction information is set.
PL-1RR: Well construction information is set.
PL-2: Well construction information is set.
PL-3R: Well construction information is set.
PL-4R: Abandoned well construction information is set.
PL-4RR: Well construction information is set.
PL-5: Abandoned well construction information is set.
PL-5R: Well construction information is set.
PL-6: Abandoned well construction information is set.
PL-6R: Abandoned well construction information is set.
PL-8R: Well construction information is set.
PL-9: Abandoned well construction information has been set.
PL-9R: Well construction information has been set.

Off-Site Wells:

SC-1: Well construction information is set.
SC-2: Well construction information is set.

SC-2D: Well construction information is set.
SC-3D: Well construction information is set.
SC-3DD: Well construction information is set.
SC-3DDD: Well construction information is set.
SC-4: Well construction information is set.
SC-4D: Well construction information is set.
SC-4DD: Well construction information is set.

Tank Field Wells:

SM-1: Well construction information is set.
TF-1: Well construction information is set.
TF-2: Well construction information is set.
TF-3: Well construction information is set.

Marine Terminal Area Wells:

TL-1: Well construction information is set.
TL-2: Well construction information is set.
TL-3: Well construction information is set.

TM-Wells:

TM-3: Well construction information is set.
TM-5: Well construction information is set.
TM-6R: Well construction information is set.

Truck Loading Rack Wells:

TR-1R: Well construction information is set.
TR-2R: Well construction information is set.
TR-3RR: Well construction information is set.
TR-3D: Well construction information is set.
TR-3DD: Well construction information is set.
TR-4R: Well construction information is set.
TR-4D: Well construction information is set.
TR-4DD: Well construction information is set.
TR-5: Well construction information is set.
TR-5D: Well construction information is set.
TR-5DD: Well construction information is set.
TR-6: Well construction information is set.
TR-6D: Well construction information is set.

Other Wells:

OBS-3: 26000005334 RCRA well – abandoned – Well construction information is set.
SPS-1: 2600025317 – abandoned, discussed in prior SLF closure plan; well construction information is set.
SPS-2: 2600025318 – abandoned, discussed in prior SLF closure plan; well construction information is set.

ATTACHMENT 2:

Refer to Excel Spreadsheet attached to email.